

35 USC §103(a) as being unpatentable over Bailey et al. and further in view of U.S. Patent No. 5,550,520 (Kobayashi).

By the present response, Applicants have amended Figs. 1 and 2 to further clarify the invention. Claims 1-21 remain pending in the present application.

Drawing Objections

The drawings have been objected to as the Examiner asserts that Figs. 1 and 2 should be designated by a legend such as "Prior Art". Applicants have amended Figs. 1 and 2 to further clarify the invention and respectfully request that these objections be withdrawn.

35 USC §102 Rejections

Claims 1-3, 5-8, 10, 11 and 15-21 have been rejected under 35 USC §102(b) as being anticipated by Bailey et al. Applicants respectfully traverse these rejections.

Bailey et al. discloses an apparatus and method for tuning a filter which takes advantage of the relationship between the center frequency and the amplitude of a filtered signal. For a given filtered signal amplitude there is a corresponding tuned frequency of the filter. Changes in the amplitude indicate changes in the frequency (see Bailey et al., col. 2, lines 15-20). Therefore, Bailey et al. determines the center frequency of the filter by applying a reference signal to the input of the filter and comparing the amplitude difference between the filtered and unfiltered signal. A tuning signal is used to set the center frequency of the filter.

Regarding independent claims 1, 10, 15, 17 and 18, Applicants submit that Bailey et al. does not disclose or suggest the limitations in the combination of each

of these claims of, inter alia, configuring a filter as an oscillator, or reconfiguring an oscillator to operate as the filter with the desired frequency as the center frequency. The Examiner asserts that Bailey et al. discloses configuring a filter as an oscillator at col. 2, lines 20-24. However, this portion of Bailey et al. merely discloses that the present invention (Bailey) also disables the reference signal when the self-tuning feature is not activated and disables the information signal when the self-tuning feature is activated, thus eliminating the risk of noise from the reference signal interfering with the information signal. Bailey et al. does not disclose or suggest anything related to an oscillator or configuring a filter as an oscillator, as recited in the claims of the present application.

Moreover, the Examiner asserts that Bailey et al. discloses reconfiguring the oscillator to operate as the filter with the desired frequency as the center frequency at col. 5, lines 51-56. However, this portion of Bailey et al. merely discloses that “then, the controller 18 directs the selector 12 to deselect the reference signal source 16 and select the information signal source 14 as the input to the filter 20, thus removing the reference signal source 16, and any associated noise, from the filter system”. Again, this portion of Bailey et al. has no mention of an oscillator. Further, this portion et al., does not disclose or suggest anything related to reconfiguring an oscillator to operate as a filter with the desired frequency as the center frequency, as recited in the claims of the present application. Bailey et al. relates to automatically tuning a continuous time filter in which a single filter selectively filters an information signal or, when tuning is desired, an unfiltered reference signal. Bailey et al. does not disclose or suggest anything related to an oscillator, configuring a filter as an oscillator, or reconfiguring an oscillator to operate

as a filter with a desired frequency as the center frequency, as recited in the claims of the present application.

Regarding claims 2, 3, 5-8, 11, 16 and 19-21, Applicants submit that these claims are dependent on one of independent claims 1, 10, 15, 17 and 18 discussed previously and, therefore, are patentable at least for the same reasons noted regarding these independent claims. For example, Bailey et al. does not disclose or suggest that configuring the filter as an oscillator includes compensating for losses in the filter, as recited in the claims of the present invention. The Examiner asserts that Bailey et al. discloses this limitation in the claims of the present application at col. 3, lines 55-57. However, this portion of Bailey et al. merely discloses that the actual tuned frequency of the filter, which, due to fabrication, aging and temperature variations, may not be the desired frequency, is then determined. This is not configuring a filter as an oscillator comprising compensating for losses in the filter, as recited in the claims of the present application.

Accordingly, Applicants submit that Bailey et al. does not disclose or suggest the limitations in the combination of each of claims 1, 2, 3, 5-8, 10, 11 and 15-21 of the present application. Applicants respectfully request that these rejections be withdrawn and that these claims be allowed.

35 USC §103 Rejections

Claim 4 has been rejected under 35 USC §103(a) as being unpatentable over Bailey et al. Applicants respectfully traverse this rejection and submit that claim 4 is dependent on independent claim 1 and, therefore, is patentable at least for the same reasons noted regarding this independent claim. Applicants have already pointed out the substantial defects regarding Bailey et al.

Accordingly, Applicants submit that Bailey et al. does not disclose, suggest or render obvious the limitations in the combination of claim 4 of the present application. Applicants respectfully request that this rejection be withdrawn and that this claim be allowed.

Claims 9, 12, 13 and 14 have been rejected under 35 USC §103(a) as being unpatentable over Bailey et al. in view of Kobayashi. Applicants respectfully traverse these rejections.

Kobayashi discloses a band pass filter using a negative resistance to compensate for resistive losses thus adjusting the Q of the filter. The coarse and fine tuning capability provides a tunable negative resistance which eliminates oscillations and compensates for negative resistance loss variations to realize improved Q factor.

Applicants submit that claims 9, 12, 13 and 14 are dependent on one of independent claims 1 and 10 and, therefore, are patentable at least for the same reasons noted previously regarding these independent claims. Applicants submit that Kobayashi does not overcome the substantial defects noted previously regarding Bailey et al.

Accordingly, Applicants submit that neither Bailey et al. nor Kobayashi, taken alone or in any proper combination, disclose, suggest or render obvious the limitations in the combination of each of claims 9, 12, 13 and 14 of the present application. Applicants respectfully request that these rejections be withdrawn and that these claims be allowed.

In view of the foregoing amendments and remarks, Applicants respectfully submit that claims 1-21 are now in condition for allowance. Accordingly, early allowance of such claims is respectfully requested.

To the extent necessary, Applicant petitions for an extension of time under 37 CFR §1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees and excess claim fees, to Deposit Account No. 01-2135 (referencing case No. 1076.40413X00) and please credit any excess fees to such deposit account.

Respectfully submitted,



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